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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,988	02/26/2002	Douglas Alan Miller	45568-00210	7053

25231 7590 07/22/2004

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EXAMINER

NI, SUHAN

ART UNIT PAPER NUMBER

2643

DATE MAILED: 07/22/2004

*6*

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/082,988

**Applicant(s)**

MILLER ET AL.

**Examiner**

Suhan Ni

**Art Unit**

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This communication is responsive to the election and amendment filed 05/21/2004.
2. An election was made without traverse to prosecute the invention of Group I, claims 1-42. Group II, claims 43-47 are withdrawn from further consideration and cancelled by the applicants, as being drawn to a non-elected invention.

***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112, 1<sup>st</sup> Paragraph***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-42 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The feature of "microphone" is not clearly supported by specification. A microphone usually refers to a device for converting acoustic signal to electrical signal. In the claims, a microphone (106, 404) not only receives acoustic input, but also receives an electrical input, which was not described in the specification how such task has been done.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1-10, 14-26 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Leysieffer (U. S. Pat. - 6,554,762).

Regarding claims 1 and 23, Leysieffer discloses a hearing aid, comprising: a transducer (16, 28) implantable within a patient to stimulate a component of an auditory system; a microphone (10-11) to process acoustic sounds and generate frequency responses representative of the acoustic sounds; and a signal processor (13) to process at least one feedback frequency response from the microphone to generate at least one test parameter and use the at least one test parameter to determine at least one operational characteristic of the microphone, wherein the feedback frequency response is generated by the microphone in response to acoustic feedback generated in response to at least one test signal provided to the transducer.

Regarding claims 2-7 and 24-26, Leysieffer further discloses the hearing aid, comprising: a test signal generator (17, 20) to generate and provide the at least one test signal to the transducer, wherein the at least one test signal causes the transducer to stimulate the component of the auditory system and generate the acoustic feedback as claimed (Fig. 1).

Regarding claims 8-10, Leysieffer further discloses the hearing aid, wherein the at least one operational characteristic of the microphone (10, 11) comprises: changing characteristics of

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acoustic frequency responses of the microphone generated in response to the acoustic sounds as claimed.

Regarding claims 14 and 34, Leysieffer further discloses the hearing aid, wherein the signal processor is a digital signal processor (13).

Regarding method claims 15-22, which are similar to rejected claims above except for being couched in method terminology; such methods would be inherent when the structure is shown in the references.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-13, 15-22, 27-33 and 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leysieffer (U. S. Pat. - 6,554,762).

Regarding claims 12-13, 32-33, 35-36 and 40-42, Leysieffer discloses a hearing aid, comprising: a transducer (16, 28) implantable within a patient to stimulate a component of an auditory system; a microphone (10-11) to process acoustic sounds and generate frequency responses representative of the acoustic sounds; and a signal processor (13) to process at least one feedback frequency response from the microphone to generate at least one test parameter and use the at least one test parameter to determine at least one operational characteristic of the microphone, wherein the feedback frequency response is generated by the microphone in

response to acoustic feedback generated in response to at least one test signal provided to the transducer. But Leysieffer does not clearly teach the processing details as claimed. Since providing one or more available signal processing methods with proper parameter setting for a DSP of a digital hearing aid is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to suitable processing, such as equalization, for the processor of the hearing aid, in order to provide a hearing aid having more desirable acoustic characteristics, especially for a specific user.

Regarding claims 11, 27-31 and 37-39, Leysieffer does not clearly teach the details of the testing processing as claimed. Since providing one or more available testing processing methods with proper parameter setting for a DSP having testing capability of a digital hearing aid is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to suitable testing processing, such as testing for noise, for the processor of the hearing aid, in order to provide a hearing aid having more desirable acoustic characteristics, especially for a specific user.

Regarding method claims 15-22, which are similar to rejected claims above except for being couched in method terminology; such methods would be inherent when the structure is shown in the references.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (703)-308-9322, and the

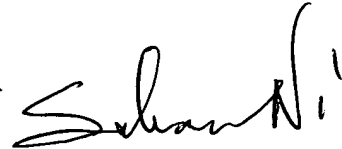
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number for fax machine is (703)-305-9508. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-3900.

SN

July 16, 2004

  
**SUHAN NI**  
**PRIMARY EXAMINER**